2004 Wind Diesel Conference

Economic Factors
St. Paul Island Project

September 2004

Project Background

System: 500 kW standalone utility, combined heat and power

Composition: Vestas V27 turbine, two 150kw Volvo diesel generators, 6000 gallon thermal tank and heating system

Configuration: High penetration/no storage wind-diesel

Application: Providing electricity and space heat to industrial/airport facility

Avg. Power Generation:876,000 kWh per year – 40% capacity factor

Summary of Project Costs

	1999 US $
• Wind turbine	250,000
• Diesel engines	100,000
• Secondary load/heating system	85,000
• Controls	100,000
• Engineering/project management	90,000
• Transportation/shipping	60,000
• Installation (road, foundation, tower erection, labor,)	120,000
Total Installed Costs	**805,000**

Economic Factors

Project was privately developed without grants or subsidies

- lease finance structure on turbine
- development/construction costs self financed

Cost of Energy: $.15/kWh (current diesel grid cost is $.43/kWh)

This is an off grid - inside the fence, IPP.

- No costs associated with transmission and distribution
- No costs associated with customers, billings, regulatory compliance

Contact Information

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